NEW KNOX MOTOR HAS ENORMOUS POWER

Latest Type Engine Serves Either for Aeroplane or for Motorboat.

In time of need American brains always come to the front; and the fact cannot be better illustrated than by the largest aeronautic motor in the world, which has just been announced as the work of Frank H. Trego, chief engineer of the Knox Motors Company at Springfield, Mass.

Many times in recent years has the attempt been made to build a successful engine of more than 200 horsepower for the air service; until now all efforts seem to have resulted in more or less failure, and it has remained for an American concern to produce the engine in the face of all the difficulties.

Excels All Foreign Makes.

The Government is to be congratulated on having within its borders a larger and better engine than has yet been built abroad, and especially on having the men who can produce promptly the needed things in scientific work as the art progresses. We learn how to build ships which no gun can harm, and then we build guns which will make scrap iron out of those same ships. This turn-and-turn-about goes on forever, and we have now reached the state of air flight to be able to handle large aeroplanes, but no motors have been produced large enough for them until this new work of Trego was announced.

This seems today a very large motor, but we predict for the future giants of the air which will make the present aeroplanes seem small, and which will require motors of perhaps 1,000 horsepower, at least by 1925, the growth of this art is so rapid.

Has Enormous Power.

It is difficult for the average person to realize what this enormous power means, even when we are told that the four-bladed propeller is fourteen feet in diameter, and that it is to turn at 1,100 to 1,200 revolutions per minute. At that speed the effort of the blades to fly out of the hub is about twenty tons each, and the propellor has a pushing power of 2,000 pounds.

The motor is perfectly adapted to use in high-speed motor boats, as this was looked out for in the design, and, with the light weight and high horsepower, should make a sensation in that field. Already motor boat enthusiasts are negotiating with the company in an effort to obtain some of these motors for the racing season next summer. Seventy-five miles per hour has been predicted by motor boat designers with this equipment.

The motor, which weighs, complete, including electric starting, electric lighting, tachometer showing propellor speeds, exhaust pipes, ignition apparatus, and provision for driving wireless telegraph apparatus, 1,400 pounds.

It was run for a period of eight hours, in which its rated 200 horsepower was exhibited during the last hour. The test was carried out on the company's Sprague electric dynamometer of 500 horsepower capacity, probably the largest equipment in the world.

Marine Band Orchestra Not to Play on Monday

Because of repairs being made to the concert hall at the barracks, the scheduled concert by the Marine Band Orchestra for Monday at the Marine Barracks will be omitted.

SPEEDY VIM TRUCK

A Rapid Light Delivery Vehicle Which Has Come Into Wide Use Among District Merchants.

FIRESTONE CO. VOTES MILLION TO WORKERS

This Sum Is Given to Employes' Welfare and Insurance Fund by Tire Firm.

Adding still another link to the welfare chain that binds its employes closer together, stockholders of the Firestone Company at their annual meeting voted to give one million dollars for an employes' welfare and insurance fund. The call of the meeting, dated August 31, proposes the increase of the capital stock to $60,000,000 and a stock dividend of 700 or 800 per cent be declared. Instead of these proposals the stockholders voted:

1. To set aside $1,000,000 for an employes' welfare fund.
2. To fix the authorized capitalization at $15,000,000.
3. To reduce nominal value of shares from $100 to $10.
4. To sell $500 worth of common stock to employes and officers.
5. To enlarge board of directors from five to seven.

The welfare and insurance fund adds a finishing touch to the plan of President Firestone. Still another of his ideas along this line saw its fulfillment two weeks ago when he dedicated and turned over to his employes the large new club house, said to have cost $300,000.

With the club house as a center for social activity and Firestone Park as an excellent solution of the home problem, the resolutions adopted at the last stockholders' meeting are another step toward the Firestone organization ideal.

Battleship Contracts To Be Let Next Week

Contracts for four United States battleships will be awarded, according to present plans, to the New York Shipbuilding Company and the Newport News Shipbuilding Company next week, while contracts for sixteen destroyers will be placed with the Fore River Shipbuilding Company, Union Iron Works, and William Cramp & Sons.

EXCESSIVE SPEED BAD TO TRUCK TIRES

Increases Amount of Shock and Greatly Magnifies Ordinary Defects.

"Running truck tires at excessive speeds is a common fault among truck drivers," says Branch Manager Gimmel, of the Goodrich Tire Company.

"The effect is the same," says Gimmel, "as running them over rough roads, for speeding magnifies every irregularity. The tires will absorb the shocks when the truck is operated at the recommended rate of speed, but increasing the speed greatly increases the force of the shocks. For instance: doubling the speed makes the force of these shocks four times as great.

"In the first place there is the danger that the centrifugal force in a swift moving tire will tear soft rubber from its base, and generate a heat that will cause the rubber to deteriorate. No matter how great the cushioning qualities of the rubber, the tire does not have time to accommodate itself to the rough surface of the road, and the destructive jolting caused will be very costly. An expensive truck can soon be jarred out of commission by speeding.

"It is surprising how the mileage of a truck tire can be increased through a little care, and inevitable that it must deteriorate rapidly if abused through excessive speeding."

Motorist Sentenced For Driving Too Slow

WORCESTER, Mass., Nov. 18.—While thousands of motorists have been arrested and fined for fast driving in Massachusetts, the first case where a motorist was brought into court for slow driving occurred here recently. Edward C. Smith, of Leominster, was before Judge Utley on a charge of driving so slowly that he obstructed traffic.

Traffic Officer Lyman J. Gorton testified that Smith came along to Harrington corner, the busiest place in Worcester, and he drove his car so slowly that he held up traffic. He was sentenced to two months in the house of correction.

Answers Found Here To Motorists' Queries

By W. H. STEWART, Jr.

Motoring Department, The Times: Finding that my front wheel wabbled a great deal, I removed the bearing recently, but was unable to fix it. One of the balls is missing, but I don't know how to get one in or the others out. It is not like the one I had on a bicycle, as the balls do not all fall out when the bearing is removed. This consists of two heavy rings with the balls between. Please let me know if this is serious, and what I should do. C. M.

You will find a groove in the side of each ring. By bringing these together, one ball at a time can be forced out on an arbor press or driven out with a hammer. Remove one and measure it carefully to at least one-thousandth of an inch. The new one must be of the same size or slightly smaller, otherwise it will take all the load and may crack. If bearings and balls are badly worn, they should be replaced by new ones.

Motoring Department, The Times: Is it not dangerous to smoke in an automobile? We find "No Smoking" signs in all the garages and occasionally read of disastrous fires through smoking around cars. When and where is it safe to smoke, and in what circumstances is it not safe? J. K. C.

Gasolene vapor is very heavy and sinks to the ground, so it is not dangerous to smoke or even strike a match in the car. The real danger come from some careless person throwing a lighted match under the car. If the carburetor has just been primed or there is a leak in the tank or fuel line, then the trouble begins.

Motoring Department, The Times: I have a 1913 model Regal car and am at a loss to understand why there is not more power developed in any position, unless it's because the oiling system" is plugged up or out of order. The pumps is working O. K., as oil flows when plug is taken out, but I know of no way to test the cylinders, that is, to see if they are getting sufficient oil. Engine seems to labor very hard and drags at all times, which causes me to think this is where the trouble lies. Can you advise me through your column how I might go about it to perhaps clean out this trouble, or advise what indications might be noticed to tell if the oiling system is working properly? W. F. S.

Crank engine by hand to tell if cylinders and bearings are getting oil enough. If there is a distinct drag they are not getting oil enough. This is especially noticeable where the compression is good, as the crank handle should spring back freely. If pistons move freely when tested as above see if carburetor is properly adjusted. If engine responds readily to throttle while idling, but drags when gears are in mesh, look for dragging brakes or bearings out of line.

Motoring Department, The Times: My Ford engine misfires when running. The wiring seems to be in good condition, and there is plenty of spark at the magneto posts but not enough at the spark plugs. Can you suggest a way to remedy the trouble? C. C. S.

The trouble is probably in vibrator. Make a gap of not more than one-quarter inch between wire and spark plug on No. 1 cylinder. Crank at No. 1 plug and adjust vibrator until spark is hottest. Do the same with remaining vibrators. If you do not use a battery, engine must be running. If it is impossible to get a good spark, touch up vibrator points with a strip of fine emery cloth. If this does not give a good spark from some one coil the condenser or secondary winding is damaged and coil must be replaced.

Motoring Department, The Times: For some time I have been an interested reader of the remarks in the automobile department of your paper. Being a prospective motor car buyer, I would appreciate any information that you could give me through your columns in regard to "valve-in-head" motors compared with "L" head motors. Will an "L" head motor develop as much power as a "valve-in-head" motor of equal size? With the same kind of a cooling system, will a "valve-in-head" motor overheat any sooner than an "L" head? B. S.

The power developed in an automobile engine does not depend on the shape of the head. In both cases the designers have worked out the best sizes of valves and cams to operate them. The design of the cooling system has been settled with equal care. If any difference in power or heating can be found between two such motors it is because of difference of design, and not because of the relative merits of one type or the other.

Motoring Department, The Times—Will you kindly tell me whether it is a good idea to keep kerosene instead of alcohol in the radiator of my Buick Six during cold weather? M. E.

There are several reasons why kerosene would not work well in the radiator. It will not mix with water, it will rot the rubber hose at top and bottom of radiator, and the oder would be very objectionable. Use alcohol in the proportion of one gallon of alcohol to three of water, adding more alcohol from time to time during the winter, and there will be no danger of freezing.

Motoring Department, The Times: What is the trouble with a motor that misses on one or more cylinders when throttled down or when pulling a hill? It is not always the same cylinder that misses. It has been given a thorough overhauling by an experienced man, but he failed to find the trouble. The motor is a four-cylinder of the separate cast type. I would be pleased to have your opinion as soon as possible, and thank you in advance for any information you may be able to give. L. L. B.

Test carburetor for water and see if adjustments are right. Look for leak in inlet manifold. Then examine ignition system thoroughly, as a loose connection would readily cause the trouble you mention.

Motoring Department, The Times—I wish you would kindly advise me when storing a car (auto) if it is necessary to drain the oil out of engine, as well as to drain the radiator. Also what would you advise doing about the tires? Remove the tires, or just let the air out of them and jack up the wheels to take the strain off of them? And information regarding storing of the car for the winter will be greatly appreciated. W. F. S.

See answers to A. F. and H. W. in previous issue. Oil should be left in engine. Jack up car and remove tubes, but paint rims with rim paint or graphite and shellac, and then replace shoes. Cover car with a covering of sheeting or other cheap material.

Motoring Department, The Times: I have a 1915 Detroiter and there is a continual grind or hum in the differential. Have adjusted pinion gear, but it does not seem to do any good. Could this hum be in the transmission? I hope to see your answer in next issue. H. U. M.

The hum may be in either place or both. Try using a heavier grease in the differential. If this does not stop it put heavy grease in the gear case. If still troublesome get some fine boxwood sawdust and put a handful in differential case or a double handful in gear case. The sawdust absorbs the grease, so that it assists in lubrication and cushions the gear teeth as they stroke.